

SEQUENCE LISTING

<110> CASSART, Jean-Pol
GERARD, Caterine Marie Ghislaine
PALMANTIER, Remi M.
HAMBLIN, Paul A.

<120> Immunogenic Compositions Comprising A Xenogenic Prostate Protein P501S

<130> B45310

<140> To Be Assigned

<150> PCT/EP03/06095
<151> 2003-06-06

<150> GB 0213364.3
<151> 2002-06-11

<150> GB 0221689.3
<151> 2002-09-18

<160> 11

<170> FastSEQ for Windows Version 4.0

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<212> PRT
<213> Rattus norvegicus

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Ala Ala Gly Ile Thr Tyr Val Pro Pro Leu Leu Leu Glu Val Gly Val
35 40 45
Glu Glu Lys Phe Met Thr Met Val Leu Gly Ile Gly Pro Val Leu Gly
50 55 60
Leu Val Ser Val Pro Leu Leu Gly Ser Ala Ser Asp Gln Trp Arg Gly
65 70 75 80
Arg Tyr Gly Arg Arg Arg Pro Phe Ile Trp Ala Leu Ser Leu Gly Val
85 90 95
Leu Leu Ser Leu Phe Leu Ile Pro Arg Ala Gly Trp Leu Ala Gly Leu
100 105 110
Leu Cys Ser Asp Thr Arg Pro Leu Glu Leu Ala Leu Leu Ile Leu Gly
115 120 125
Val Gly Leu Leu Asp Phe Cys Gly Gln Val Cys Phe Thr Pro Leu Glu
130 135 140
Ala Leu Leu Ser Asp Leu Phe Arg Asp Pro Asp His Cys Arg Gln Ala
145 150 155 160
Phe Ser Val Tyr Ala Phe Met Ile Ser Leu Gly Gly Cys Leu Gly Tyr
165 170 175
Leu Leu Pro Ala Ile Asp Trp Asp Thr Ser Ala Leu Ala Pro Tyr Leu
180 185 190

Gly Thr Gln Glu Glu Cys Leu Phe Gly Leu Leu Thr Leu Ile Phe Leu
 195 200 205
 Ile Cys Val Ala Ala Thr Leu Leu Val Ala Glu Glu Ala Val Leu Gly
 210 215 220
 Pro Pro Glu Pro Ala Glu Gly Leu Leu Val Ser Ser Val Ser Arg Arg
 225 230 235 240
 Cys Cys Ser Cys His Ala Gly Leu Ala Phe Arg Asn Leu Gly Thr Leu
 245 250 255
 Phe Pro Arg Leu His Gln Leu Cys Cys Arg Met Pro Arg Thr Leu Arg
 260 265 270
 Arg Leu Phe Val Ala Glu Leu Cys Ser Trp Met Ala Leu Met Thr Phe
 275 280 285
 Thr Leu Phe Tyr Thr Asp Phe Val Gly Glu Gly Leu Tyr Gln Gly Val
 290 295 300
 Pro Arg Ala Glu Pro Gly Thr Glu Ala Arg Arg His Tyr Asp Glu Gly
 305 310 315 320
 Ile Arg Met Gly Ser Leu Gly Leu Phe Leu Gln Cys Ala Ile Ser Leu
 325 330 335
 Phe Phe Ser Leu Val Met Asp Arg Leu Val Gln Lys Phe Gly Thr Arg
 340 345 350
 Ser Val Tyr Leu Ala Ser Val Met Thr Phe Pro Val Ala Ala Ala Ala
 355 360 365
 Thr Cys Leu Ser His Ser Val Val Val Val Thr Ala Ser Ala Ala Leu
 370 375 380
 Thr Gly Phe Thr Phe Ser Ala Leu Gln Ile Leu Pro Tyr Thr Leu Ala
 385 390 395 400
 Ser Leu Tyr His Arg Glu Lys Gln Val Phe Leu Pro Lys Tyr Arg Gly
 405 410 415
 Asp Ala Gly Gly Ser Ser Glu Asp Ser Gln Thr Thr Ser Phe Leu
 420 425 430
 Leu Gly Pro Lys Pro Gly Ala Pro Phe Pro Asn Gly His Val Gly Pro
 435 440 445
 Gly Gly Ser Ser Ile Leu Val Pro Pro Pro Ala Leu Cys Gly Ala Ser
 450 455 460
 Ala Cys Asp Val Ser Met Arg Val Val Val Gly Glu Pro Pro Glu Ala
 465 470 475 480
 Lys Val Val Thr Gly Arg Gly Ile Cys Leu Asp Leu Ala Ile Leu Asp
 485 490 495
 Ser Ala Phe Leu Leu Ser Gln Val Ala Pro Ser Leu Phe Met Gly Ser
 500 505 510
 Ile Val Gln Leu Ser His Ser Val Thr Ala Tyr Met Val Ser Ala Ala
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 <212> DNA
 <213> Rattus norvegicus

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<210> 3
 <211> 553
 <212> PRT
 <213> *Maccaca fascicularis*

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 Gln Leu Leu Leu Ile Asn Leu Leu Thr Phe Gly Leu Glu Val Cys Leu
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 Ala Ala Gly Ile Thr Tyr Val Pro Pro Leu Leu Leu Glu Val Gly Val
 35 40 45
 Glu Glu Lys Phe Met Thr Met Val Leu Gly Ile Gly Pro Val Leu Gly
 50 55 60
 Leu Val Ser Val Pro Leu Leu Gly Ser Ala Ser Asp His Trp Arg Gly
 65 70 75 80
 Arg Tyr Gly Arg Arg Arg Pro Phe Ile Trp Ala Leu Ser Leu Gly Ile
 85 90 95
 Leu Leu Ser Leu Phe Leu Ile Pro Arg Ala Gly Trp Leu Ala Gly Leu
 100 105 110

Leu Cys Pro Asp Pro Arg Pro Leu Glu Leu Ala Leu Leu Ile Leu Gly
115 120 125
Val Gly Leu Leu Asp Phe Cys Gly Gln Val Cys Phe Thr Pro Leu Glu
130 135 140
Ala Leu Leu Ser Asp Leu Phe Arg Asp Pro Asp His Cys Arg Gln Ala
145 150 155 160
Tyr Ser Val Tyr Ala Phe Met Ile Ser Leu Gly Gly Cys Leu Gly Tyr
165 170 175
Leu Leu Pro Ala Ile Asp Trp Asp Thr Ser Ala Leu Ala Pro Tyr Leu
180 185 190
Gly Thr Gln Glu Glu Cys Leu Phe Gly Leu Leu Thr Leu Ile Phe Leu
195 200 205
Thr Cys Val Ala Ala Thr Leu Leu Val Ala Glu Glu Ala Ala Leu Gly
210 215 220
Pro Ala Glu Pro Ala Glu Gly Leu Ser Ala Pro Ser Leu Pro Ser His
225 230 235 240
Cys Cys Pro Cys Trp Ala Arg Leu Ala Phe Arg Asn Leu Gly Ala Leu
245 250 255
Leu Pro Arg Leu His Gln Leu Cys Cys Arg Met Pro Arg Thr Leu Arg
260 265 270
Arg Leu Phe Val Ala Glu Leu Cys Ser Trp Met Ala Leu Met Thr Phe
275 280 285
Thr Leu Phe Tyr Thr Asp Phe Val Gly Glu Gly Leu Tyr Gln Gly Val
290 295 300
Pro Arg Ala Glu Leu Gly Thr Glu Ala Arg Arg His Tyr Asp Glu Gly
305 310 315 320
Val Arg Met Gly Ser Leu Gly Leu Phe Leu Gln Cys Ala Ile Ser Leu
325 330 335
Val Phe Ser Leu Val Met Asp Arg Leu Val Gln Arg Phe Gly Thr Arg
340 345 350
Ala Val Tyr Leu Ala Ser Val Ala Ala Phe Pro Val Ala Ala Gly Ala
355 360 365
Thr Cys Leu Ser His Ser Val Ala Val Val Thr Ala Ser Ala Ala Leu
370 375 380
Thr Gly Phe Thr Phe Ser Ala Leu Gln Ile Leu Pro Tyr Thr Leu Ala
385 390 395 400
Ser Leu Tyr His Arg Glu Arg Gln Val Phe Leu Pro Lys Tyr Arg Gly
405 410 415
Asp Ala Gly Gly Thr Ser Ser Glu Asp Ser Leu Met Thr Ser Phe Leu
420 425 430
Pro Gly Pro Lys Pro Gly Ala Pro Phe Pro Asn Gly His Val Gly Ala
435 440 445
Gly Gly Ser Gly Leu Leu Pro Pro Pro Ala Leu Cys Gly Ala Ser
450 455 460
Ala Cys Asp Val Ser Val Arg Val Val Gly Glu Pro Thr Glu Ala
465 470 475 480
Arg Val Val Pro Gly Arg Gly Ile Cys Leu Asp Leu Ala Ile Leu Asp
485 490 495
Ser Ala Phe Leu Leu Ser Gln Val Ala Pro Ser Leu Phe Met Gly Ser
500 505 510
Ile Val Gln Leu Ser Gln Ser Val Thr Ala Tyr Met Val Ser Ala Ala
515 520 525
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Lys Ser Asp Leu Ala Lys Tyr Ser Val
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<210> 4
<211> 3514
<212> DNA
<213> *Macaca fascicularis*

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<211> 553
<212> PRT
<213> Homo sapiens

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Ala Ala Gly Ile Thr Tyr Val Pro Pro Leu Leu Leu Glu Val Gly Val
35 40 45
Glu Glu Lys Phe Met Thr Met Val Leu Gly Ile Gly Pro Val Leu Gly
50 55 60
Leu Val Cys Val Pro Leu Leu Gly Ser Ala Ser Asp His Trp Arg Gly
65 70 75 80
Arg Tyr Gly Arg Arg Pro Phe Ile Trp Ala Leu Ser Leu Gly Ile
85 90 95
Leu Leu Ser Leu Phe Leu Ile Pro Arg Ala Gly Trp Leu Ala Gly Leu
100 105 110
Leu Cys Pro Asp Pro Arg Pro Leu Glu Leu Ala Leu Ile Leu Gly
115 120 125
Val Gly Leu Leu Asp Phe Cys Gly Gln Val Cys Phe Thr Pro Leu Glu
130 135 140
Ala Leu Leu Ser Asp Leu Phe Arg Asp Pro Asp His Cys Arg Gln Ala
145 150 155 160
Tyr Ser Val Tyr Ala Phe Met Ile Ser Leu Gly Gly Cys Leu Gly Tyr
165 170 175
Leu Leu Pro Ala Ile Asp Trp Asp Thr Ser Ala Leu Ala Pro Tyr Leu
180 185 190
Gly Thr Gln Glu Glu Cys Leu Phe Gly Leu Leu Thr Leu Ile Phe Leu
195 200 205
Thr Cys Val Ala Ala Thr Leu Leu Val Ala Glu Glu Ala Ala Leu Gly
210 215 220
Pro Thr Glu Pro Ala Glu Gly Leu Ser Ala Pro Ser Leu Ser Pro His
225 230 235 240
Cys Cys Pro Cys Arg Ala Arg Leu Ala Phe Arg Asn Leu Gly Ala Leu
245 250 255
Leu Pro Arg Leu His Gln Leu Cys Cys Arg Met Pro Arg Thr Leu Arg
260 265 270
Arg Leu Phe Val Ala Glu Leu Cys Ser Trp Met Ala Leu Met Thr Phe
275 280 285
Thr Leu Phe Tyr Thr Asp Phe Val Gly Glu Gly Leu Tyr Gln Gly Val
290 295 300
Pro Arg Ala Glu Pro Gly Thr Glu Ala Arg Arg His Tyr Asp Glu Gly
305 310 315 320
Val Arg Met Gly Ser Leu Gly Leu Phe Leu Gln Cys Ala Ile Ser Leu

325	330	335
Val Phe Ser Leu Val Met Asp Arg	Leu Val Gln Arg Phe Gly	Thr Arg
340	345	350
Ala Val Tyr Leu Ala Ser Val Ala	Ala Phe Pro Val Ala Ala	Gly Ala
355	360	365
Thr Cys Leu Ser His Ser Val Ala	Val Val Thr Ala Ser Ala	Ala Leu
370	375	380
Thr Gly Phe Thr Phe Ser Ala Leu	Gln Ile Leu Pro Tyr Thr	Leu Ala
385	390	400
Ser Leu Tyr His Arg Glu Lys Gln	Val Phe Leu Pro Lys Tyr	Arg Gly
405	410	415
Asp Thr Gly Gly Ala Ser Ser Glu	Asp Ser Leu Met Thr Ser Phe	Leu
420	425	430
Pro Gly Pro Lys Pro Gly Ala Pro	Phe Pro Asn Gly His Val	Gly Ala
435	440	445
Gly Gly Ser Gly Leu Leu Pro	Pro Pro Pro Ala Leu Cys	Gly Ala Ser
450	455	460
Ala Cys Asp Val Ser Val Arg Val	Val Val Gly Glu Pro Thr	Glu Ala
465	470	480
Arg Val Val Pro Gly Arg Gly	Ile Cys Leu Asp Leu Ala	Ile Leu Asp
485	490	495
Ser Ala Phe Leu Leu Ser Gln Val	Ala Pro Ser Leu Phe Met	Gly Ser
500	505	510
Ile Val Gln Leu Ser Gln Ser Val	Thr Ala Tyr Met Val Ser	Ala Ala
515	520	525
Gly Leu Gly Leu Val Ala Ile	Tyr Phe Ala Thr Gln Val	Val Phe Asp
530	535	540
Lys Ser Asp Leu Ala Lys Tyr Ser	Ala	
545	550	

<210> 6
 <211> 255
 <212> PRT
 <213> Homo sapiens

<400> 6		
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Arg His Tyr Asp Glu Gly Val Arg	Met Gly Ser Leu Gly	Leu Phe Leu
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Gln Cys Ala Ile Ser Leu Val Phe	Ser Leu Val Met Asp	Arg Leu Val
35	40	45
Gln Arg Phe Gly Thr Arg Ala Val	Tyr Leu Ala Ser Val	Ala Ala Phe
50 55	60	
Pro Val Ala Ala Gly Ala Thr Cys	Leu Ser His Ser Val	Ala Val Val
65 70	75	80
Thr Ala Ser Ala Ala Leu Thr Gly	Phe Thr Phe Ser Ala	Leu Gln Ile
85	90	95
Leu Pro Tyr Thr Leu Ala Ser Leu	Tyr His Arg Glu Lys	Gln Val Phe
100	105	110
Leu Pro Lys Tyr Arg Gly Asp	Thr Gly Gly Ala Ser Ser	Glu Asp Ser
115	120	125
Leu Met Thr Ser Phe Leu Pro	Gly Pro Lys Pro Gly	Ala Pro Phe Pro
130	135	140
Asn Gly His Val Gly Ala Gly	Ser Gly Leu Leu Pro	Pro Pro Pro
145	150	155
		160

Ala Leu Cys Gly Ala Ser Ala Cys Asp Val Ser Val Arg Val Val Val
165 170 175
Gly Glu Pro Thr Glu Ala Arg Val Val Pro Gly Arg Gly Ile Cys Leu
180 185 190
Asp Leu Ala Ile Leu Asp Ser Ala Phe Leu Leu Ser Gln Val Ala Pro
195 200 205
Ser Leu Phe Met Gly Ser Ile Val Gln Leu Ser Gln Ser Val Thr Ala
210 215 220
Tyr Met Val Ser Ala Ala Gly Leu Gly Leu Val Ala Ile Tyr Phe Ala
225 230 235 240
Thr Gln Val Val Phe Asp Lys Ser Asp Leu Ala Lys Tyr Ser Ala
245 250 255

<210> 7
<211> 231
<212> PRT
<213> Homo sapiens

<400> 7
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20 25 30
Tyr Leu Ala Ser Val Ala Ala Phe Pro Val Ala Ala Gly Ala Thr Cys
35 40 45
Leu Ser His Ser Val Ala Val Val Thr Ala Ser Ala Ala Leu Thr Gly
50 55 60
Phe Thr Phe Ser Ala Leu Gln Ile Leu Pro Tyr Thr Leu Ala Ser Leu
65 70 75 80
Tyr His Arg Glu Lys Gln Val Phe Leu Pro Lys Tyr Arg Gly Asp Thr
85 90 95
Gly Gly Ala Ser Ser Glu Asp Ser Leu Met Thr Ser Phe Leu Pro Gly
100 105 110
Pro Lys Pro Gly Ala Pro Phe Pro Asn Gly His Val Gly Ala Gly Gly
115 120 125
Ser Gly Leu Leu Pro Pro Pro Ala Leu Cys Gly Ala Ser Ala Cys
130 135 140
Asp Val Ser Val Arg Val Val Val Gly Glu Pro Thr Glu Ala Arg Val
145 150 155 160
Val Pro Gly Arg Gly Ile Cys Leu Asp Leu Ala Ile Leu Asp Ser Ala
165 170 175
Phe Leu Leu Ser Gln Val Ala Pro Ser Leu Phe Met Gly Ser Ile Val
180 185 190
Gln Leu Ser Gln Ser Val Thr Ala Tyr Met Val Ser Ala Ala Ala Leu
195 200 205
Gly Leu Val Ala Ile Tyr Phe Ala Thr Gln Val Val Phe Asp Lys Ser
210 215 220
Asp Leu Ala Lys Tyr Ser Ala
225 230

<210> 8
<211> 1788
<212> DNA
<213> Artificial Sequence

<220>

<223> DNA sequence for alphapreproto signal sequence fused to human P501S and fused to a His tag

<400> 8

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tcagatttag aaggggattt cgtatggct gttttgccat ttccaacag cacaataac 180
gggttattgt ttataaatac tactattgcc agcattgctg ctaaaagaaga aggggtatct 240
ctcgagaaaa gagaggctga accatggtg ctggcattt gtccagtgct gggctggc 300
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<210> 9

<211> 595

<212> PRT

<213> Artificial Sequence

<220>

<223> Polypeptide sequence for alphapreproto signal sequence fused to human P501S and fused to a His tag

<400> 9

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Leu Ala Ala Pro Val Asn Thr Thr Glu Asp Glu Thr Ala Gln Ile
20 25 30
Pro Ala Glu Ala Val Ile Gly Tyr Ser Asp Leu Glu Gly Asp Phe Asp
35 40 45
Val Ala Val Leu Pro Phe Ser Asn Ser Thr Asn Asn Gly Leu Leu Phe
50 55 60
Ile Asn Thr Thr Ile Ala Ser Ile Ala Ala Lys Glu Glu Gly Val Ser
65 70 75 80

Leu Glu Lys Arg Glu Ala Glu Ala Met Val Leu Gly Ile Gly Pro Val
85 90 95
Leu Gly Leu Val Cys Val Pro Leu Leu Gly Ser Ala Ser Asp His Trp
100 105 110
Arg Gly Arg Tyr Gly Arg Arg Arg Pro Phe Ile Trp Ala Leu Ser Leu
115 120 125
Gly Ile Leu Leu Ser Leu Phe Leu Ile Pro Arg Ala Gly Trp Leu Ala
130 135 140
Gly Leu Leu Cys Pro Asp Pro Arg Pro Leu Glu Leu Ala Leu Leu Ile
145 150 155 160
Leu Gly Val Gly Leu Leu Asp Phe Cys Gly Gln Val Cys Phe Thr Pro
165 170 175
Leu Glu Ala Leu Leu Ser Asp Leu Phe Arg Asp Pro Asp His Cys Arg
180 185 190
Gln Ala Tyr Ser Val Tyr Ala Phe Met Ile Ser Leu Gly Gly Cys Leu
195 200 205
Gly Tyr Leu Leu Pro Ala Ile Asp Trp Asp Thr Ser Ala Leu Ala Pro
210 215 220
Tyr Leu Gly Thr Gln Glu Glu Cys Leu Phe Gly Leu Leu Thr Leu Ile
225 230 235 240
Phe Leu Thr Cys Val Ala Ala Thr Leu Leu Val Ala Glu Glu Ala Ala
245 250 255
Leu Gly Pro Thr Glu Pro Ala Glu Gly Leu Ser Ala Pro Ser Leu Ser
260 265 270
Pro His Cys Cys Pro Cys Arg Ala Arg Leu Ala Phe Arg Asn Leu Gly
275 280 285
Ala Leu Leu Pro Arg Leu His Gln Leu Cys Cys Arg Met Pro Arg Thr
290 295 300
Leu Arg Arg Leu Phe Val Ala Glu Leu Cys Ser Trp Met Ala Leu Met
305 310 315 320
Thr Phe Thr Leu Phe Tyr Thr Asp Phe Val Gly Glu Gly Leu Tyr Gln
325 330 335
Gly Val Pro Arg Ala Glu Pro Gly Thr Glu Ala Arg Arg His Tyr Asp
340 345 350
Glu Gly Val Arg Met Gly Ser Leu Gly Leu Phe Leu Gln Cys Ala Ile
355 360 365
Ser Leu Val Phe Ser Leu Val Met Asp Arg Leu Val Gln Arg Phe Gly
370 375 380
Thr Arg Ala Val Tyr Leu Ala Ser Val Ala Ala Phe Pro Val Ala Ala
385 390 395 400
Gly Ala Thr Cys Leu Ser His Ser Val Ala Val Val Thr Ala Ser Ala
405 410 415
Ala Leu Thr Gly Phe Thr Phe Ser Ala Leu Gln Ile Leu Pro Tyr Thr
420 425 430
Leu Ala Ser Leu Tyr His Arg Glu Lys Gln Val Phe Leu Pro Lys Tyr
435 440 445
Arg Gly Asp Thr Gly Gly Ala Ser Ser Glu Asp Ser Leu Met Thr Ser
450 455 460
Phe Leu Pro Gly Pro Lys Pro Gly Ala Pro Phe Pro Asn Gly His Val
465 470 475 480
Gly Ala Gly Gly Ser Gly Leu Leu Pro Pro Pro Pro Ala Leu Cys Gly
485 490 495
Ala Ser Ala Cys Asp Val Ser Val Arg Val Val Val Gly Glu Pro Thr
500 505 510
Glu Ala Arg Val Val Pro Gly Arg Gly Ile Cys Leu Asp Leu Ala Ile
515 520 525
Leu Asp Ser Ala Phe Leu Leu Ser Gln Val Ala Pro Ser Leu Phe Met

530	535	540
Gly Ser Ile Val Gln Leu Ser Gln Ser Val Thr Ala Tyr Met Val Ser		
545	550	555
Ala Ala Gly Leu Gly Leu Val Ala Ile Tyr Phe Ala Thr Gln Val Val		
565	570	575
Phe Asp Lys Ser Asp Leu Ala Lys Tyr Ser Ala Gly Gly His His His		
580	585	590
His His His		
595		

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 <211> 553
 <212> PRT
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<400> 10		
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20	25	30
Ala Ala Gly Ile Thr Tyr Val Pro Pro Leu Leu Leu Glu Val Gly Val		
35	40	45
Glu Glu Lys Phe Met Thr Met Val Leu Gly Ile Gly Pro Val Leu Gly		
50	55	60
Leu Val Ser Val Pro Leu Leu Gly Ser Ala Ser Asp Gln Trp Arg Gly		
65	70	75
Arg Tyr Gly Arg Arg Pro Phe Ile Trp Ala Leu Ser Leu Gly Val		
85	90	95
Leu Leu Ser Leu Phe Leu Ile Pro Arg Ala Gly Trp Leu Ala Gly Leu		
100	105	110
Leu Tyr Pro Asp Thr Arg Pro Leu Glu Leu Ala Leu Leu Ile Leu Gly		
115	120	125
Val Gly Leu Leu Asp Phe Cys Gly Gln Val Cys Phe Thr Pro Leu Glu		
130	135	140
Ala Leu Leu Ser Asp Leu Phe Arg Asp Pro Asp His Cys Arg Gln Ala		
145	150	155
Phe Ser Val Tyr Ala Phe Met Ile Ser Leu Gly Gly Cys Leu Gly Tyr		
165	170	175
Leu Leu Pro Ala Ile Asp Trp Asp Thr Ser Val Leu Ala Pro Tyr Leu		
180	185	190
Gly Thr Gln Glu Glu Cys Leu Phe Gly Leu Leu Thr Leu Ile Phe Leu		
195	200	205
Ile Cys Met Ala Ala Thr Leu Phe Val Thr Glu Glu Ala Val Leu Gly		
210	215	220
Pro Pro Glu Pro Ala Glu Gly Leu Leu Val Ser Ala Val Ser Arg Arg		
225	230	235
Cys Cys Pro Cys His Val Gly Leu Ala Phe Arg Asn Leu Gly Thr Leu		
245	250	255
Phe Pro Arg Leu Gln Gln Leu Cys Cys Arg Met Pro Arg Thr Leu Arg		
260	265	270
Arg Leu Phe Val Ala Glu Leu Cys Ser Trp Met Ala Leu Met Thr Phe		
275	280	285
Thr Leu Phe Tyr Thr Asp Phe Val Gly Glu Gly Leu Tyr Gln Gly Val		
290	295	300
Pro Arg Ala Glu Pro Gly Thr Glu Ala Arg Arg His Tyr Asp Glu Gly		
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Ile Arg Met Gly Ser Leu Gly Leu Phe Leu Gln Cys Ala Ile Ser Leu
 325 330 335
 Val Phe Ser Leu Val Met Asp Arg Leu Val Gln Lys Phe Gly Thr Arg
 340 345 350
 Ser Val Tyr Leu Ala Ser Val Met Thr Phe Pro Val Ala Ala Ala Ala
 355 360 365
 Thr Cys Leu Ser His Ser Val Val Val Val Thr Ala Ser Ala Ala Leu
 370 375 380
 Thr Gly Phe Thr Phe Ser Ala Leu Gln Ile Leu Pro Tyr Thr Leu Ala
 385 390 395 400
 Ser Leu Tyr His Arg Glu Lys Gln Val Phe Leu Pro Lys Tyr Arg Gly
 405 410 415
 Asp Ala Gly Gly Ser Ser Gly Glu Asp Ser Gln Thr Thr Ser Phe Leu
 420 425 430
 Pro Gly Pro Lys Pro Gly Ala Leu Phe Pro Asn Gly His Val Gly Ser
 435 440 445
 Gly Ser Ser Gly Ile Leu Ala Pro Pro Pro Ala Leu Cys Gly Ala Ser
 450 455 460
 Ala Cys Asp Val Ser Met Arg Val Val Val Gly Glu Pro Pro Glu Ala
 465 470 475 480
 Arg Val Val Thr Gly Arg Gly Ile Cys Leu Asp Leu Ala Ile Leu Asp
 485 490 495
 Ser Ala Phe Leu Leu Ser Gln Val Ala Pro Ser Leu Phe Met Gly Ser
 500 505 510
 Ile Val Gln Leu Ser His Ser Val Thr Ala Tyr Met Val Ser Ala Ala
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 Lys Asn Asp Leu Ala Lys Tyr Ser Val
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<210> 11
 <211> 2188
 <212> DNA
 <213> Mus musculus

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